

WHAT IS CLAIMED IS:

1. An antenna apparatus for receiving or transmitting radio waves at two different frequencies, comprising:
a pair of antenna elements having different resonant
5 frequencies, and
a pair of phase shift circuits for shifting phase of said radio waves, wherein
feed points of said pair of antenna elements are connected to a radio circuit via said pair of phase shift
10 circuits, respectively.
2. An antenna apparatus according to claim 1, wherein:
one of said phase shift circuits which are coupled to said one of said antenna elements shifts phase of said
15 radio waves so as to increase an impedance of said one of said antenna elements at the resonance frequency of the other one of said antenna elements.
3. An antenna apparatus according to claim 1, wherein:
20 said phase shift circuit comprises a lumped circuit.
4. An antenna apparatus according to claim 1, wherein:
said phase shift circuit comprises a distributed
constant circuit.
- 25 5. An antenna apparatus for receiving or transmitting radio waves at a plurality of frequencies, comprising:
a plurality of antenna elements having different resonant frequencies; and
30 a plurality of phase shift circuits for shifting phase of said radio waves, wherein

feed points of said plurality of antenna elements are connected to a radio circuit via said plurality of phase shift circuits, respectively.

- 5 6. The antenna apparatus according to claim 5, wherein:
one of said phase shift circuits which is coupled to
said one of said antenna elements shifts phase of said
radio waves so as to increase an impedance of said one of
said antenna elements at the resonance frequency of
10 another one of said antenna elements.
7. The antenna apparatus according to claim 5, wherein:
each of said plurality of phase shift circuits
comprises a lumped circuit.
- 15 8. The antenna apparatus according to claim 5, wherein:
each of said plurality of phase shift circuits
comprises a distributed constant circuit.
- 20 9. A portable wireless communication apparatus having
an antenna apparatus for receiving or transmitting radio
waves at a plurality of frequencies, said antenna
apparatus comprising:
a plurality of antenna elements having different
25 resonant frequencies; and
a plurality of phase shift circuits for shifting
phase of said radio waves, wherein
feed points of said plurality of antenna elements
are connected to a radio circuit via said plurality of
30 phase shift circuits, respectively.

10. The portable wireless communication apparatus according to claim 9, wherein:

said portable wireless communication apparatus is a portable telephone.

5